

**LISTING OF CLAIMS:**

1. (original) A semiconductor wafer having an active surface, the wafer comprising:
  - a multiplicity of dice, each die having a plurality of contact pads formed on the active surface of the wafer;
  - a plurality of solder bumps, wherein at least a portion of said plurality of solder bumps are each coupled with an associated contact pad; and
  - a support coating formed on the active surface of the wafer, wherein the support coating is sufficiently rigid such that it can significantly constrain portions of the solder bumps near the contact pads during a subsequent reflow of any of said plurality of solder bumps.
2. (original) A semiconductor wafer as recited in claim 1, wherein said support coating is applied to the active surface such that the underlying contact pads, under bump metallizations, and active surface are all substantially covered by the support coating.
3. (original) A semiconductor wafer as recited in claim 1, wherein the height of said support coating is in the range of about 20 to 70 percent of the pre-reflow height of said solder bumps.
4. (original) A semiconductor wafer as recited in claim 3, wherein the height of said support coating is about 50 percent of the pre-reflow height of said solder bumps.
5. (original) A semiconductor wafer as recited in claim 1, wherein the junction between the solder bumps and their associated contact pads define wetting angles that are at least approximately 40 degrees.

6. (original) A semiconductor wafer as recited in claim 1, wherein the support coating is formed from an epoxy based material.

7. (original) A semiconductor wafer as recited in claim 6 wherein the epoxy based material that forms the support coating is substantially fully cured.

8. (currently amended) An integrated circuit device, comprising:

a die having an active surface;

a plurality of solder bumps formed on the active surface of said die; and

a support coating formed on said active surface of said die, wherein said support coating has been fully cured prior to any reflow of any of said plurality of solder bumps, and wherein the junctions between the solder bumps and their associated surfaces of formation define wetting angles that are at least approximately 40 degrees.

9. (original) The integrated circuit device of claim 8, wherein said support coating is formed from an epoxy based material.

10. (original) The integrated circuit device of claim 8, wherein the height of said support coating is about 20 to 70 percent of the pre-reflow height of said solder bumps.

11. (original) The integrated circuit device of claim 10, wherein the height of said support coating is about 40 to 60 percent of the pre-reflow height of said solder bumps.

12. (original) The integrated circuit device of claim 8, wherein said support coating is applied to the active surface such that the underlying contact pads, under bump metallizations, and active surface are all substantially covered by the support coating.

13. (original) An integrated circuit device, comprising:

a die having an active surface and a plurality of die contact pads formed on the active surface of the die;

a plurality of solder bumps coupled with associated die contact pads; and

a support coating formed on said active surface of said die, wherein said support coating is sufficiently rigid such that it is suitable for significantly constraining portions of the solder bumps near the bump to die interfaces during a subsequent reflow of said plurality of solder bumps.

14. (original) A system comprising:

the integrated circuit device of claim 13; and

a substrate having a plurality of substrate contact pads, wherein said integrated circuit device has been coupled with one or more substrate contact pads to form one or more solder joints, and wherein the junction between at least one of said one or more solder joints and its associated die contact pad defines a wetting angle that is at least approximately 40 degrees.

15. (original) The system of claim 14, wherein the offset distance between said die and said substrate is at least 12 mils.

16. (original) The system of claim 14, wherein the maximum solder joint width is less than 115 percent of the maximum width of the corresponding solder bump prior to reflow.

17-20. (canceled)

21. (new) The integrated circuit device of claim 13, wherein said support coating has been fully cured prior to any reflow of any of said plurality of solder bumps.

22. (new) A semiconductor wafer, comprising:  
a multiplicity of integrated circuit devices as recited in claim 13.

23. (original) A semiconductor wafer as recited in claim 22, wherein the height of said support coating is about 50 percent of the pre-reflow height of said solder bumps.

24. (original) A semiconductor wafer as recited in claim 22, wherein the junction between the solder bumps and their associated contact pads define wetting angles that are at least approximately 40 degrees.